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California Energy Commission
Attention: Clare Laufenberg Gallardo
claufenb@energy.state.ca.us
1516 Ninth Street, MS 46
Sacramento, California 95811-3109

Dear Ms. Gallardo:

First Solar Inc.[1] ("First Solar"), a manufacturer of thin-film solar modules, is pleased to provide the following comments on the Phase 1B Report of the Renewable Energy Transmission Initiative ("RETI").

INTRODUCTION AND SUMMARY

First Solar appreciates the importance of the Stakeholder Steering Committee's work in identifying upgrades to California's electric transmission system. First Solar applauds the RETI Phase 1B Working Subgroup's ("the Subgroup") comprehensive approach in assessing transmission needs for renewable energy development. This comprehensive approach will facilitate the achievement of the State's Renewable Portfolio Standard ("RPS"). The Subgroup has and will continue to make significant progress towards achieving the RPS by accurately portraying the relative costs and benefits of different renewable generation types and their strategic geographical placement within the State.

The Subgroup made significant progress toward presenting a more timely and comprehensive outlook on renewable energy development by expanding the cost scenarios and application options for photovoltaic technologies ("PV"). In Phase 1B, the Subgroup included an alternate cost scenario to reflect the costs of thin-film PV. Thin-film PV costs substantially less than that of crystalline PV technology. In Section 5.8.5, the Subgroup noted that the alternate cost scenario for thin-film was "dramatic." Despite the dramatic results, the Subgroup provided no calculations or graphics to quantify the dramatic results of the alternate cost scenario relative to the base case scenario. First Solar believes that in order for the Subgroup to provide an accurate

[1] First Solar Inc., an international supplier of photovoltaic technologies, was formed in 1999 and launched production of commercial products in 2002. First Solar's IPO took place in 2006, and is traded on the NASDAQ. First Solar is now the largest manufacturer of thin-film solar modules. First Solar has expanded manufacturing capacity to an expected 735 MW in 2008, and expects to expand its capacity to more than 1 GW by 2009.

analysis, calculations and graphics, as well as a discussion in the executive summary are imperative. Without this additional analysis, decision makers will not have a complete picture of the range of cost effective options available to best meet California's RPS and carbon reduction goals.

DISCUSSION

The Results of the RETI Alternate Case Analysis Addressing Thin-Film Photovoltaic Technology Should be Made Transparent and Highlighted in the Executed Summary.

Certain PV technologies possess unique benefits in terms of achieving the State's RPS. The timely achievement of the RPS goal is furthered by the fact that due to its modularity, PV can leverage the existing sub-transmission and distribution system. Compared to other renewable resources, PV developers can quickly respond to demand patterns and load growth by installing PV on a utility scale (20 MW) distributed basis. Finally and perhaps most importantly, PV offers one of, if not the lightest environmental impact available among the renewable resource options considered in the RETI process. Unfortunately, due to the base case assumption that PV costs are defined by the cost of crystalline PV cost projections, the RETI base case did not account for any PV development.

The Phase 1B Report improves the projection of PV resources that the Phase 1A Subgroup made. Phase 1A identified tracking crystalline technology as the proxy technology to represent PV resources. In Section 5.8.5 of the Phase 1B Report, the Subgroup recognizes that costs of crystalline technology are relatively high. Thin-film technology costs almost half that of crystalline. This disparity in costs makes crystalline a poor proxy for PV resources. Accordingly, the Subgroup conducted an alternate sensitivity run to reflect the impact of lower cost, fixed array thin-film PV in both larger scale (150 MW) and distributed applications (20 MW). The outcome of the sensitivity run affected both the rankings of the CREZs and the projected net-short requirement. Under the alternate scenario, every CREZ with solar potential will benefit. These results also led the Subgroup to re-rank three CREZs at the top of the CREZ list. Perhaps most noteworthy, the Subgroup concluded that non-CREZ resources increased by more than twenty times, thereby closing two thirds of the net-short requirement. As stated in Section 5.8.5, "[the] results of the sensitivity run are dramatic."

In order to shed light on the alternative sensitivity results, the Subgroup must provide transparency as to what "dramatic results" mean in relationship to the base case. As noted above, the base case scenario provides an incomplete picture of the potential role PV can play by not addressing the cost of thin-film PV. In the base case, no mention of PV is supported by environmental and energy supply tables and graphs due to the cost assumptions associated with crystalline PV. To effectively facilitate the comparison of the alternate and base cases, the Subgroup should conduct and publish a similar level of analysis for the alternate case. Environmental and energy supply tables and graphs for the alternate case should be published in

the Phase 1B Report. In addition, the Subgroup should provide further transparency of these results by discussing the alternate scenario in the Executive Summary. In addition, the bubble slide on page ES-8 should show the thin-film alternate scenario.

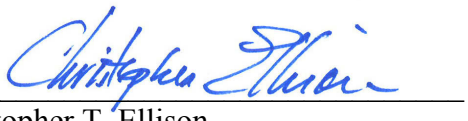
Not explicitly accounting for PV (in both the base and alternate cases) in the ranking and assessment of CREZs would create an inaccurate projection of California's renewable development potential. As mentioned above, PV is a unique renewable resource. The Phase 1B Subgroup took a significant step towards remedying the inaccuracy of the PV cost projections in Phase 1A. In order to capitalize on the Subgroup's significant work thus far, the Subgroup should present the results of the analysis of the thin-film alternate cost scenario. The results of the alternate scenario should be compared to those in the base case, and a description of the comparison should be highlighted in the Executive Summary.

The Subgroup Should Confirm Whether Transmission Loss Credits Were Included In The Cost Scenarios.

Distributed Generation ("DG") PV projects tend not to incur transmission line losses, which benefits the operator/owner of those projects. First Solar would like to confirm if or how transmission line loss credits were accounted for in the distributed generation portion (20 MW sites) of the alternative case. This credit would benefit DG PV projects because these projects do not have the same line losses that remote renewable projects have. To provide the most accurate projection of California's renewable energy potential this benefit should also be highlighted in the Phase 1B Report.

First Solar Inc. appreciates this opportunity to provide comments on the RETI Phase 1B Report and is available to discuss any of these issues at length.

Respectfully submitted,

By 

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